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Featured by [NOAA](#), a member of the U.S. Global Change Research Program

On May 9, 2013, the daily mean concentration of carbon dioxide in the atmosphere surpassed 400 parts per million (ppm) for the first time since measurements began in 1958 at Mauna Loa Observatory in Hawaii.

Before the Industrial Revolution in the 19th century, global average CO₂ was about 280 ppm. During the last 800,000 years, CO₂ fluctuated between about 180 ppm during ice ages and 280 ppm during interglacial warm periods. Today's rate of increase is more than 100 times faster than the increase that occurred when the last ice age ended.

"That increase is not a surprise to scientists," said NOAA senior scientist Pieter Tans, with the Global Monitoring Division of NOAA's Earth System Research Laboratory in Boulder, Colo. "The evidence is conclusive that the strong growth of global CO₂ emissions from the burning of coal, oil, and natural gas is driving the acceleration." [Read the full story on the NOAA website here](#).

For More Information

- NOAA carbon dioxide data [here](#)
- Scripps Institution of Oceanography carbon dioxide data [here](#)
- NOAA's [Mauna Loa Observatory](#)

- An [animation](#) of carbon dioxide levels over the last 800,000 years